UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/645,489	MISTRY ET AL.
	Examiner	Art Unit
	Man Phan	2475

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *10 August 2009*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,2,4,5 and 7-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *11, 2, 4, 5, 7, 8, 10-15, 19-23* is/are rejected.

7) ☒ Claim(s) *9 and 16-18* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

    1. ☐ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____.

    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Response to Amendment and Argument

1.   This communication is in response to applicant's 08/10/2009 Amendment in the

application of Mistry et al. for the "*Multi staged services policing*" filed 08/22/2003.   This

application claims priority from provisional application 60/440,625 filed 01/17/2003.   The

amendment and response has been entered and made of record.   Claims 1, 9, 11, 13-17, 19 have

been amended, and new claims 22-23 have been added.   Claims 1-2, 4-5, 7-23 are pending in the

application.

The rejection of record with respect to claim 11, 16-17 under 35 U.S.C. 112 2nd

paragraph, are hereby removed based on applicant's amendment.

2.   Applicant's remarks and argument to the rejected claims are insufficient to distinguish

the claimed invention from the cited prior arts or overcome the rejection of said claims under 35

U.S.C. 103 as discussed below.   Applicant's argument with respect to the pending claims have

been fully considered, but they are not persuasive for at least the following reasons.

3.   In response to Applicant's argument regarding rejection of claim 12 under 35 USC 101.

Claims 12 is rejected under 101 because the phrase "*computer readable storage medium*" recited

in the claims is not a non-transitory form of signal transmission indicating in the claim or

specification or in the record.   Therefor claim 12 is considered to be a signal per se.

To overcome this rejection, it is suggested applicant change "computer readable storage medium

to ---*computer readable storage medium being a non-transitory signal* ---.

4.   In response to Applicant's argument that the reference does not teach or reasonably

suggest the functionality upon which the Examiner relies for the rejection. The Examiner first

emphasizes for the record that the claims employ a broader in scope than the Applicant's

disclosure in all aspects. In addition, the Applicant has not argued any narrower interpretation of

the claim limitations, nor amended the claims significantly enough to construe a narrower

meaning to the limitations. Since the claims breadth allows multiple interpretations and

meanings, which are broader than Applicant's disclosure, the Examiner is required to interpret

the claim limitations in terms of their broadest reasonable interpretations while determining

patentability of the disclosed invention. See MPEP 2111. In other words, the claims must be

given their broadest reasonable interpretation consistent with the specification and the

interpretation that those skilled in the art would reach. See *In re Hyatt*, 211 F.3d 1367, 1372, 54

USPQ2d 1664, 1667 (Fed. Cir. 2000), *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464,

1468 (Fed. Cir. 1999), and *In re American Academy of Science Tech Center*, 2004 WL 1067528

(Fed. Cir. May 13, 2004). Any term that is not clearly defined in the specification must be given

its plain meaning as understood by one of ordinary skill in the art. See MPEP 2111.01. See also

In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), *Sunrace Roots Enter.*

Co. v. SRAM Corp., 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003), *Brookhill-*

Wilk 1, LLC v. Intuitive Surgical, Inc., 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir.

2003). The interpretation of the claims by their broadest reasonable interpretation reduces the

possibility that, once the claims are issued, the claims are interpreted more broadly than justified.

See *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). Also,

limitations appearing in the specification but not recited in the claim are not read into the claim.

See *In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993)*. Therefore, the failure

to significantly narrow definition or scope of the claims and supply arguments commensurate in

scope with the claims implies the Applicant intends broad interpretation be given to the claims.

The Examiner has interpreted the claims in parallel to the Applicant in the response and

reiterates the need for the Applicant to distinctly define the claimed invention.

5.   Applicant's argument with respect to the rejected claims that the cited references fail to

teach or suggest the novel concept of *"receiving feedback from the service policer "*. However,

Ganti et al. (US#7,266,606) discloses in Fig. 4 a block diagram illustrated the traffic flow

diagram utilizing the feedback information. As seen in Fig. 4, Class C1 traffic 24 enters a first

policer 50 which marks traffic as either conforming or non-conforming according to rate R1. The

non-conforming traffic may be dropped right there, or may be left in the packet stream for the

network to decide what to do with it at a later time. The traffic thus marked 52, and class C2

traffic 26 enters a second policer 54 which polices the combination of class C2 traffic 26 and

conforming class C1 traffic at R1+R2 (utilizing the feedback information R1 from the

downstream service policer to cause the upstream service policer to modify analysis R1+R2 of

further traffic units receiced)(See also Fig. 3; Col. 4, lines 11 plus and Col. 4, lines 60 plus).

Furthermore, Galloway teaches the bandwidth management in TCP/IP networks (that is, policies

operable to allocate available bandwidth from a single logical link to network flows) is

accomplished by a combination of TCP end systems and routers which queue packets and

discard packets when some congestion threshold is exceeded. The discarded and therefore

unacknowledged packet serves as a feedback mechanism to the TCP transmitter (*receive feedback information from the downstream service policer*)(Col. 3, lines 1 plus).

6.   In response to Applicant's argument that there is no suggestion to combine the references, i.e., Galloway et al. (US#7,155,502) in view of Ganti et al. (US#7,266,606) as proposed in the office action. The Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971).   It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Since no substantial amendments have been made and the Applicant's arguments are not persuasive, the claims are drawn to the same invention and the text of the prior art rejection can be found in the previous Office Action. Therefore, the Examiner maintains that the references cited and applied in the last office actions for the rejection of the claims are maintained in this office action.

Claim Rejections - 35 USC § 112, 1ˢᵗ paragraph

7.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8.   Claims 1, 13-14 and 22-23 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1, 13-14, 23 the limitation *"one or more processors"* have no support in the original specification.

Regarding claims 22, the limitation *"first processor and second processor"* has no support in the original specification.

The newly added limitations of the claims have no support in the disclosure (MPEP § 2161 - § 2165.04. In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1998). Waldemar Link, GmbH & Co. v. Osteonics Corp. 32 F.3d 556, 559, 31 USPQ2d 1855, 1857 (Fed. Cir. 1994); In re Rasmussen, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981). See MPEP § 2163.06 - § 2163.07(b) for a discussion of the relationship of new matter to 35 U.S.C. 112, first paragraph. New matter includes not only the addition of wholly unsupported subject matter, but may also include adding specific percentages or compounds after a broader original disclosure, or even the omission of a step from a method. See MPEP § 608.04 to § 608.04(c). See In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976) and MPEP § 2163.05 for guidance in

determining whether the addition of specific percentages or compounds after a broader original

disclosure constitutes new matter.

Claim Rejections - 35 USC § 101

9.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

10.   Claim 12 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-

statutory subject matter, specifically, as directed to "a computer readable medium storing

instructions" or "a software routine". The claimed "computer program product" or "software

routine" of claim 12 is non-statutory as at no time in the claim does applicant define the software

routine. A computer readable storage medium per se is not in one of the statutory categories.

The computer program limitation is not explicitly tied to the recited steps. Also, the claimed

program product comprising a storage medium reads on non-statutory embodiments of computer

readable media drawn to signals. As signals are not a tangible medium, the instant claim 12 does

not recite a tangible result in a form that is useful to the user of the process.

Claim 12 is direct to "a computer readable medium storing instructions" which is not

supported by either a specific asserted utility or a well established utility. Claim 12 merely

defines a *"data record for storing instructions"*, and is not directed to statutory subject matter.

The claims appear to be nothing more than a signal not tangibly embodied in a manner so as to

be executable and thus non-statutory for failing to be in one of the categories of invention. It's

not tangibly embodies and non-functional descriptive material - data per se. Therefore, what

applicant is attempting to claim as a computer program product or data record as is known in the

art. The claim is actually drawn to non-functional descriptive material stored on a machine

readable medium. The description given in the specification does not cure this problem. In

practical terms, claims define non-statutory processes if they simply manipulate abstract ideas,

e.g., a bid or a bubble hierarchy, without some claimed practical application, Schrader, 22 F.3d at

293-94, 30 USPQ2d at 1458-59; Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759.

11. Claim 12 is also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the

claimed invention is not supported by either a specific asserted utility or a well established utility

for the reasons set forth above, one skilled in the art clearly would not know how to use the

claimed invention.

Claim Rejections - 35 USC § 103

12.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of
> this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter
> as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14.   Claims 1-2, 10-11, 13-15, 19-21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Galloway et al. (US#7,155,502) in view of Ganti et al. (US#7,266,606).

Regarding claims 1-2 and 13-14, the references disclose a novel system and method for

policing data traffic communications networks, according to the essential features of the claims.

Galloway et al. (US#7,155,502) discloses a packet policing system comprising: receiving a

traffic unit (col. 6, lines 31-35; col. 11, lines 19-21); analyzing an application associated with

said traffic unit (identification of traffic type (e.g., application, service, protocol) (col. 7, lines

56-59; col. 8, lines 14-40; col. 11, lines 25-35); processing based on the analyzing (enforcing

policies based on traffic type) (col. 9, line 60-col. 10, line 14);

Galloway does not disclose expressly feedback received from the downstream service

policer by the upstream service policer.   However, Galloway teaches the bandwidth

management in TCP/IP networks (that is, policies operable to allocate available bandwidth from

a single logical link to network flows) is accomplished by a combination of TCP end systems

and routers which queue packets and discard packets when some congestion threshold is

exceeded. The discarded and therefore unacknowledged packet serves as a feedback mechanism

to the TCP transmitter (Col. 3, lines 1 plus). In the same field of endeavor, Ganti et al.

(US#7,266,606) teaches in Fig. 4 a block diagram illustrated the traffic flow diagram utilizing

the feedback information. As seen in Fig. 4, Class C1 traffic 24 enters a first policer 50 which

marks traffic as either conforming or non-conforming according to rate R1. The non-conforming

traffic may be dropped right there, or may be left in the packet stream for the network to decide

what to do with it at a later time. The traffic thus marked 52, and class C2 traffic 26 enters a

second policer 54 which polices the combination of class C2 traffic 26 and conforming class C1

traffic at R1+R2 (utilizing the feedback information R1 from the downstream service policer to

cause the upstream service policer to modify analysis R1+R2 of further traffic units

receiced)(See also Fig. 3; Col. 4, lines 11 plus and Col. 4, lines 60 plus).

Regarding claims 4-8, the reliance on a commonly known standard such as the use of

Layer 2 technologies like Frame relay and ATM cell in the manner claimed would have been

obvious to the artisan as a matter of the design choice. The most common approach to handling

these problems has been to use an Asynchronous Transfer Mode (ATM) virtual circuit (VC) for

each subscriber and to set a limit on the VC. This is known as traffic provisioning on a per

subscriber line basis. This is often accomplished using layer 2 technologies like Frame relay and

ATM as amitted by the Applicant as prior art (See specification, page 2). There are a number of

standards used in digital telecommunications, including TCP/IP, Ethernet, HDLC, ISDN, ATM,

X.25, Frame Relay, Digital Data Service, FDDI (Fiber Distributed Data Interface), T1, xDSL,

Wireless, Cable Modems, and Satellite among others. Many of these standards employ different

packet and/or frame formats. The term "frame" is often used in reference to encapsulated data at

OSI layer 2, including a destination address, control bits for flow control, the data or payload,

and CRC (cyclic redundancy check) data for error checking. The term "packet" is often used in

reference to encapsulated data at OSI layer 3.   Furthermore, Referring to the Figure in

Bonaventure (US#6,618,356), a data traffic policer POL is shown. The data traffic policer POL

is preferred to be included in an ATM communication network on a data communication link L.

The data communication link data transports packets i.e. ATM cells. The receiver REC receives

the incoming data packets being transported over the common communication link L. Upon

reception of a data packet, the receiver REC provides the information of the header part of this

data packet i.e. ATM header to the first determiner DET1 and to the second determiner DET2

(Col. 6, lines 23 plus).

Regarding claims 10-11, they are method claims corresponding to the apparatus claims as

discussed in paragraph above. Therefore, claims 10-11 are analyzed and rejected as previously

discussed with respect to claims above.

Regarding claims 15, 19, Galloway and Ganti teach the invention substantially as claimed

in claims 1 and 13 above. Ganti further teach wherein the upstream services policer is adapted to

use the feedback from the downstream services policer to cause the upstream services policer to

modify analysis of further traffic units received by the upstream services policer (Figs. 3-4; . 3;

Col. 4, lines 11 plus and Col. 4, lines 60 plus).

Regarding claims 20, 21, Galloway and Ganti teach the invention substantially as claimed

in claims 13-14 above. Ganti further teach wherein the downstream services policer affords a

higher priority to traffic units received from the second upstream services policer than to traffic

units received from the fast upstream services policer (Fig. 3; Col. 4, lines 11 plus).

One skilled in the art of communications would recognize the need for a novel system

and method for services policing in data communications networks, and would apply Ganti's

novel use of feedback information in cascaded policing system into Galloway's system and

method for policing the flows of data stream of packets for bandwidth management. Therefore,

It would have been obvious to a person of ordinary skill in the art at the time of the invention

was made to apply Ganti's cascaded policing systems and methods into Galloway's methods

apparatuses and systems facilitating distribution of updated traffic identification functionality to

bandwidth management devices with the motivation being to provide a system and method for a multi staged services policing.

Allowable Subject Matter

15. Claims 9, 16-18 are objected to as being dependent upon the rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims..

16. The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest where the upstream services policer is a first upstream services policer and the multi-staged services policer further comprises a second upstream services policer adapted to transmit traffic units received at the second upstream services policer to the downstream services policer based on an analysis specific to the second upstream services policer and wherein the downstream services policer affords a higher priority to traffic units received from the second upstream services policer than to traffic units received from the first upstream services policer, as specifically recited in the claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Chow (US#7,609,634) is cited to show the communication traffic policing apparatus and methods.

The Gopalakrishnan et al. (US#7,385,954) is cited to show the method of transmitting or retransmitting packets in a communication system.

The Zhang et al. (US#7,328,274) is cited to show the QoS in a gateway.

The Zhang et al. (US#7,130,917) is cited to show the QoS in a gateway.

The Stephenson et al. (US#2009/0109847) is cited to show the bi-directional policer for data rate enforcement over half duplex mediums.

The Briscoe et al. (US#2008/0192636) is cited to show the policing networks.

18.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION THIS ACTION IS MADE FINAL**. See MPEP ' 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can

normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dang Ton, can be reached on (571) 272-3171. The fax phone number for the

organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (571) 272-2600.

20.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information for

unpublished applications is available through Private PAIR only. For more information about

the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to

the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-

9197.

Mphan

Dec. 03, 2009

/Man Phan/

Primary Examiner, Art Unit 2475